Augusta Exit 113 – Route3 to Route 27 Traffic Study
Natural Resource Existing Conditions Technical Memo Report

PIN 17592.00

Introduction

This study analyzes traffic flow in the Exit 112- Route 27 area. It looks at several strategies including reconfiguring and extending Exit 113 into North Augusta. The study area for this project includes the area around Exit 113 and Exit 112. The Study area roughly includes the land adjacent to Route 27 (Civic Center Drive) up to the intersection of Old Belgrade Road, Interstate 95 in the area between Exits 112 and 113, the Route 3 Exit 113 ramps near the eight Rod Road, and along Old Belgrade Road between Route 104 and the intersection of Route 27. (Figure 1-Study area map)

General Landscape Description

The study area is generally built up with the exception of the block of land between Route 27 and Old Belgrade Road. The topography in the area is gently rolling fields interspersed with steep hill sides. Topography in the study area ranges for 200 to 420 feet above sea level, generally flatter along the roads and rising higher between Route 27 and Old Belgrade Road. One stream valley, Stone Brook, occurs in the center of the study area and crosses Civic Center Drive and Old Belgrade Road near Exit 113. (Figure 4 Other Habitat Map). Most of the project falls within the Stone Brook watershed with the exception of study area adjacent to the Eight Rod Road and north of Route 3 drains by surface topography into Fisher Brook which drains into the Kennebec River near the Route 3 crossing of the Kennebec River.

Aquatic Resources

Waterways- Streams

Only one perennial stream, Stone Brook, occurs in the study area. (Figure 3 Habitat Map) This stream is a tributary of Bond Brook, which flows into the Kennebec River. The stream is low gradient, and there are natural falls downstream of Route 27 that impede movement of aquatic organisms. The broad, flat floodplain is vegetated and seasonally flooded.

Fisheries and Aquatic Organisms

Downstream of the falls the Maine Department of Inland Fisheries and Wildlife (MDIFW) has indicated that a habitat survey has indicated that brook trout, brown trout and Atlantic salmon will use Stone Brook from it's confluence with Bond Brook and the falls. There is a 10 to 12 foot ledge waterfall in the vicinity of the crossing of Route 27 (Civic Center Drive) that is a natural barrier to salmonids and other fish, with the notable exception of American eels. A September 2009 joint USFWS and MaineDOT electrofishing survey found dozens of eels of various life stages from elvers to adults, blacknose dace, stickleback, dusky salamanders, green frogs, shiners, and fallfish. In the project area, at the crossing of Old Belgrade road, a qualitative survey was taken. On June 18th 2010, an area from the culvert to about 150 feet upstream was sampled. The flow was sluggish, 0.25 FPS. The project area is a warm water fishery. Anecdotal information from an area resident had caught

the same species we had found, and had not seen any brook trout in this section at any time. Water temperature was 23.2 Celsius.

Table 1 Aquatic species observed found in Stone Brook

Fish	Amphibians and Invertebrates
Creek Chubs of various sizes	Green Frog
Numerous Young stickleback	Bull Frog and Bull Frog Tadpoles
Numerous Black Nosed Dace	Crawfish (Carapace 1 to 2 inches)-2
Golden shiner	Crawfish 1 inch carapace
Eels 8 to 12 inches	Numerous crawfish juveniles
Eel 2 feet	Odonata juvenile
Elver	Numerous clams
Sucker	Numerous Physid Snails
	Leach –Hirudinea

Upstream of the falls the stream in somewhat impounded with a broad floodway at beginning downstream of the crossing of Route 27. At the crossing of Old Belgrade Road, the stream is slow moving and also has a floodway associated with it. MDIFW has indicated that this reach is a warm water fishery

Wetland Resources

Several wetland complexes occur in the project area. These wetlands occur mainly along overland topographical drainages or at the base of steep slopes. The area is highly developed and wetland complexes are fragmented by development features.

The wetlands are described in Appendix 2. Those descriptions describe wetlands in terms of individual or clusters of wetland. A best professional judgment of the functions and values are included. The mapping is found in Appendix 1 (Figure 3 Wetland Map)

Table 2 Wetland Identification, Coward Class, and Functions and Values

WET_ID	Cowardin Wetland classification	Primary Function	Other functions
112-1	PSS	GWD	FFA
112-10	PEM	AH	WH FFA
112-2	PEM	STR	WH
112-3	PSS	STR	WH
112-4	PEM	FFA	STR
112-5	PEM	FFA	STR
112-6	PSS	FFA	STR GWD
112-7	PEM	FFA	STR GWD
112-8	PEM	STR	WH
112-9	PSS	AH	WH FFA
113-1	PFO	WH	STR
113-10	PEM	FFA	WH
113-11	PEM	NONE	
113-12	PEM	WH	SS STR
113-13	PFO	FFA	STR
113-14	PEM	FFA	STR

113-15	PEM	STR	
113-16	PEM	STR	WH
113-17	PEM	NONE	
113-18	PEM	STR	
113-19	PEM	NONE	
113-2	PFO	WH	STR
113-20	PEM	NONE	
113-22	PEM	NONE	
113-23	PEM	PE	GWD WH
113-24	PEM	GWD	PE
113-25	PEM	FFA	GWD WH
113-26	PEM	STR	PE
113-3	PFO	NONE	
113-4	PFO	NONE	
113-5	PSS	GWD	WH
113-6	PEM	STR	GWD
113-7	PEM	FF	AH SS
113-8	PEM	GWD	FFA WH
113-9	PSS	FF	AH SS
CONN-1	PSS/UB	GWD	AH
CONN-2	PSS	GWD	AH
CONN-3	PSS/UB	WH	GWD

Key to Functions	
GWD Groundwater Discharge Recharge	PE Production Export
FFA Floodflow Alteration	SS Shoreland Stabilization
AH Aquatic Habitat	WH Wildlife Habitat
STR Sediment Toxicant removal/attenuation	

Other- Recreational, Scientific, Endangered species habitat, etc.

Terrestrial Resources

Wildlife

According to MDIFW, this location appears to have no essential or significant wildlife habitat associated with the area. Minimum impacts to wildlife may be anticipated. (Appendix 3)

Field reconnaissance by MaineDOT staff did find a Significant Vernal Pool within the project area. A few other permanent pools were found that contained evidence of amphibian breeding.

There is a vernal pool is in Wetland Conn-3. (Figure 4 Habitat Map) This is a large, natural pool that is fed by snow melt water and some ground water discharge. This has an upland overstory and a shrub understory of alders and winterberry. This pool had 50 wood frog eggmasses and 12 Spotted Salamander Eggmasses in Spring of 2009. This would be a Significant Vernal Pool under MDEP regulations.

There was also evidence of amphibian breeding in pools in Wetlands Conn-1 and Conn-2. These had less than significant numbers of wood frogs eggmasses and appeared to

be artificial, excavated pools. These pools are not considered significant vernal pools under MDEP regulations.

There were a high number of woodfrog eggmasses, found in Wetland 113-23. This was a shallow drainage depression in a field. The water depth and morphology at the site indicated that the water dries up in a short period of time and that the hydroperiod was insufficient to accommodate successful amphibian breeding. This pool was dried by the middle of May. Currently, no alignment will affect these vernal pools or a 500 foot dispersal habitat area around it.

Undeveloped Habitat Blocks.

There is one Undeveloped Habitat Block in the project area. (Figure 4 Habitat Map). It is found in the parcel surrounded by Interstate 95 to the south, Route 27 to the west and Old Belgrade road to the east. This block is less than 100 acres. This habitat block is fragmented by an open field in the southerly part and by a utility corridor in the northern part. In the current level of development, there is a small approximately 60 acre block of forested habitat and 12 acre open field habitat block within the undeveloped block. Currently, no alignment will affect undeveloped habitat blocks.

Botanical Resources

The Maine Natural Areas Program has no rare botanical features mapped in the study area. (Appendix 3.)

Rare, Threatened and Endangered species.

State listed species- According to MDIFW and the Department of Conservation, There are no state listed species found in the project area. (Appendix 3)

Federal listed species- According to databases provided to MaineDOT as part of a screening programmatic agreement between MaineDOT, USFWS, FHWA and NOAA, there are no federally listed Threatened or Endangered species within the project area. Downstream of the project area, in Stone Brook there are federally endangered Atlantic salmon and Atlantic salmon critical habitat. These do not make it past falls downstream of Route 27.

Other Issues

Hazardous Materials

Exit 113. The Phase I Environmental Assessment is completed for Exit 113. There have been releases of petroleum along this project that need further investigation (Phase II). An accident involving a fuel oil delivery truck on Old Belgrade Road reportedly lost 2,000 gallons of fuel oil with only approximately 300 gallons recovered from the roadside ditch. This was in the vicinity of the connection. Speculation has the rest of the oil soaking into the ground and potentially under the road. The new Harold Alfond Cancer Care Center was a former golf coarse. During construction of a lower parking lot, a significant amount of petroleum contaminated soil was encountered and a significant amount of the contaminated soil was removed. It is not anticipated that this impacted the project but should be investigated with borings. NRF Industries located at the northern end of the project has an underground diesel tank.

Boring locations have been marked out and Dig Safe needs to have them cleared again. As of now the MaineDOT drill rig is scheduled for other priority jobs and will also be going into the shop for yearly maintenance. Coordination is needed with Geotechnical staff to either do the borings together or do the environmental borings when the drill rig becomes available.

Exit 112. A number of potential petroleum issues have been identified during the Phase I investigation that will need follow up Phase II (subsurface explorations). Some of the Phase I work suggests a history of significant petroleum releases

Appendix 1 Natural Resource Graphics

Figure 1 Study area

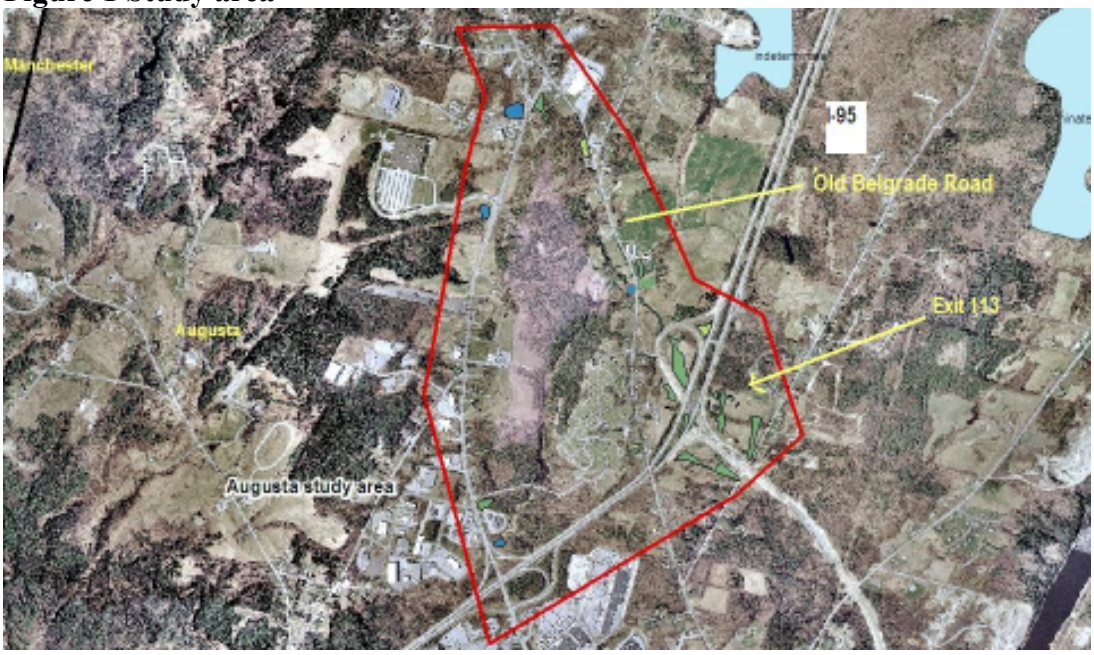


Figure 2 Study Area on Topographical map (existing Exit 113 does not show)

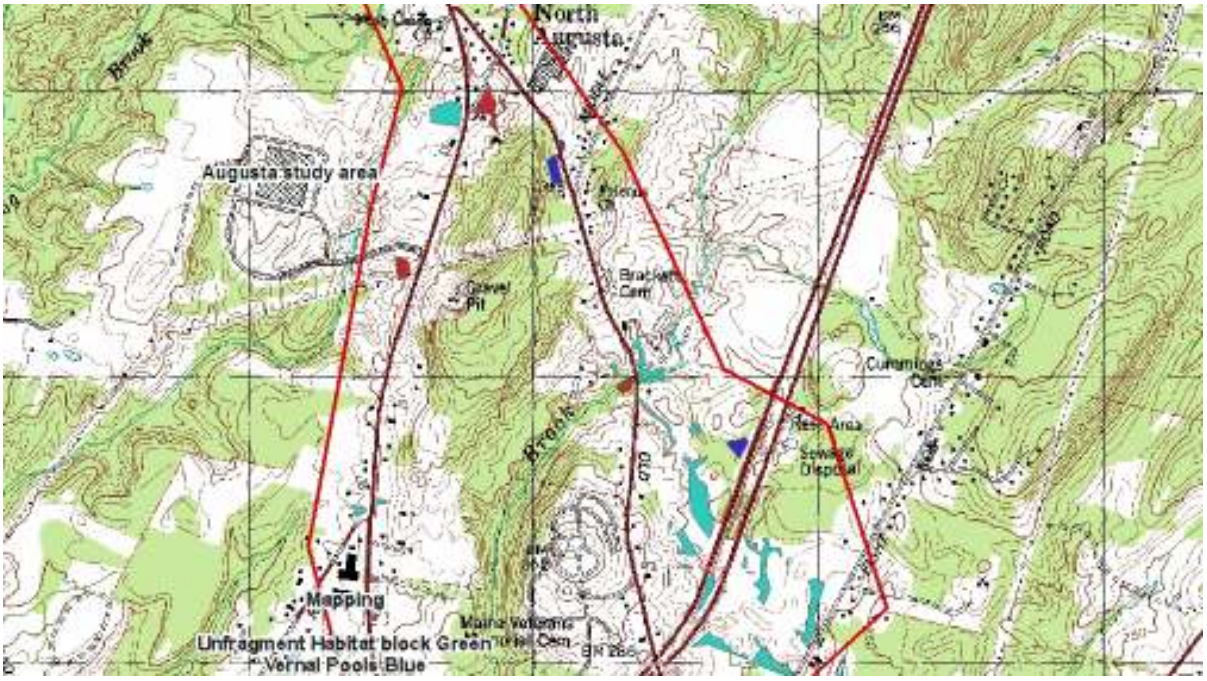


Figure 3 Wetland mapping

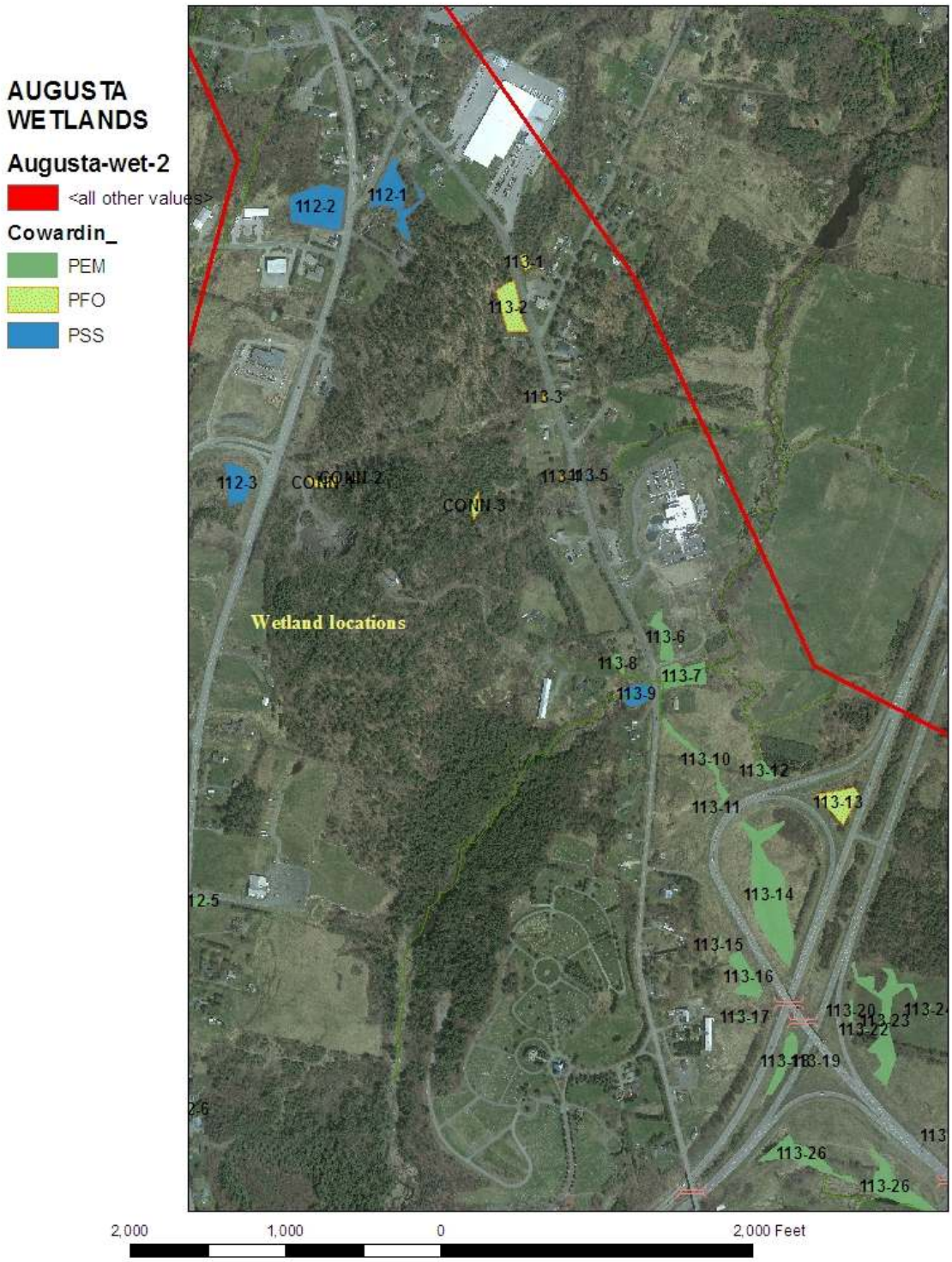
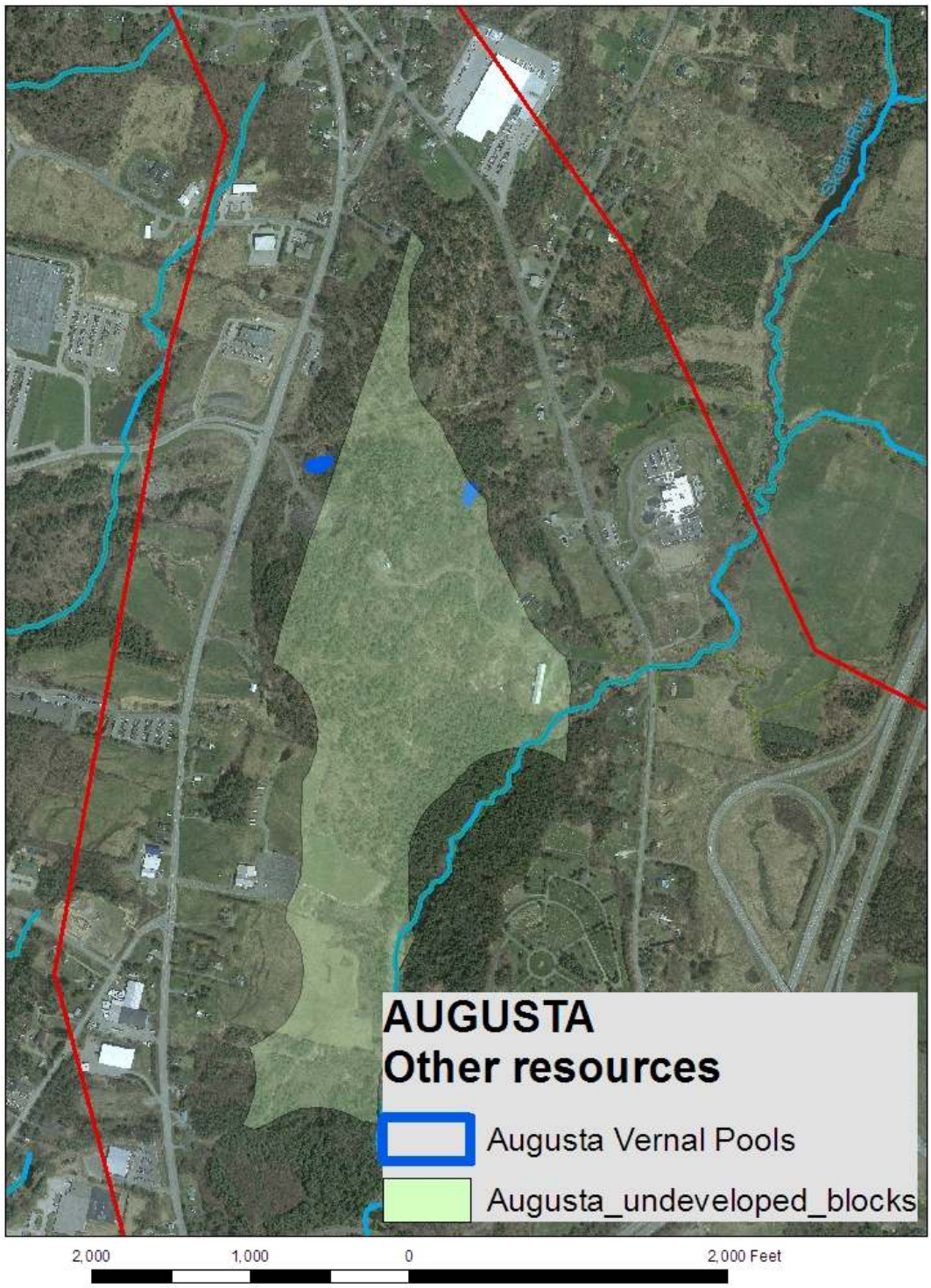


Figure 4


AUGUSTA
Other resources
Augusta Vernal Pools
Augusta_undeveloped_blocks
2,000
1,000
0
2,000 Feet

Appendix 2 Wetland Data sheets and Functions and Values Assessment

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 112-1	**5. Cowardin Class:** PSS	**6. Stationing/Location:**
7. Dominant Vegetation: Alders, Black ash. Cattail		**8. Wetland Morphology:** Discharging hill side
8a. NEIWPCC Soils Criteria: No samples taken		
9. Notes: This wetland drains a field and discharges out of a steep hill side. The water runs overland and is impounded by Route 27		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**X**			**x**									
Principal	**X**												

Impacted area notes:

Whole wetland notes:

11. Is this wetland part of larger complex: Yes, this flows into a low point in the landscape, and is part of a complex that extends across Route 27.

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 112-2	**5. Cowardin Class:** PEM/SS	**6. Stationing/Location:**
7. Dominant Vegetation: Cattail, Purple Loosestrife, Willows, Alders,		**8. Wetland Morphology:** Basin wetland at toe of large hill
8a. NEIWPCC Soils Criteria: No soils taken		
9. Notes:		

10. FVA Table: impacted area.

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs		**x**			**x**								
Principal					**x**								

Impacted area notes: This is a basin wetland that is adjacent to a highway. It collects runoff from upstream and from the highway.

11. Is this wetland part of larger complex: It is along a topographical drainage

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 112-3	**5. Cowardin Class:** PSS	**6. Stationing/Location:**
7. Dominant Vegetation: Grasses- Not sampled		**8. Wetland Morphology: Discharging slope**
8a. NEIWPCC Soils Criteria: Not Sampled		
9. Notes: Review and delineation based on mapping-		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs				**X**									
Principal				**X**									

Impacted area notes: Sediment toxicant functions because it is a broad vegetated swale down slope of a highway

Whole wetland notes:

11. Is this wetland part of larger complex:

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 112-4; 112-5	**5. Cowardin Class:** PEM	**6. Stationing/Location:**
7. Dominant Vegetation: Cattails. Bulrush. Purple loosestrife		**8. Wetland Morphology:** Drainage swale
8a. NEIWPCC Soils Criteria: No soils taken		
9. Notes: This wetland is a drainage swale at the base of a slope. It is also surrounded by developed properties.		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs		**X**		**X**									
Principal		**X**											

Impacted area notes:

The wetland collects surface run off from surrounding uplands. 112-4 and 112-5 are connected by a drainage culvert under Route 27. The wetlands also retain sediments from the adjacent Route 27.

11. Is this wetland part of larger complex: A string of drainages

12. Impact Notes/Photos 112-4

112-5

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 112 – 6, 112-7	**5. Cowardin Class:** **PSS**	**6. Stationing/Location:**
7. Dominant Vegetation: Willow, Cattail		**8. Wetland Morphology:** Drainage swale
8a. NEIWPCC Soils Criteria: no samples taken		
9. Notes:		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs		**X**		**x**									
Principal		**X**											

Impacted area notes: The wetland collects surface run off from surrounding uplands. 112-4 and 112-5 are connected by a drainage culvert under Route 27. The wetlands also retain sediments from the adjacent Route 27.

11. Is this wetland part of larger complex: Yes

12. Impact Notes/Photos

112-6

112-7

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 112-8	**5. Cowardin Class:** PEM/SS	**6. Stationing/Location:**
7. Dominant Vegetation: Phragmites-Alders		**8. Wetland Morphology:** Basin associated with a stream
8a. NEIWPCC Soils Criteria: No soils taken		
9. Notes:		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs				**X**									
Principal				**X**									

Impacted area notes: This wetland abuts Route 27 and flows into Stone Brook, It position helps to protect water quality in Stone Brook

11. Is this wetland part of larger complex: yes 112-9 and 112-10

12. Impact Notes/Photos
112-8

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 112- 9 112-10	**5. Cowardin Class: PEM/SS/RUS**	**6. Stationing/Location:**
7. Dominant Vegetation: Bulrushes, grasses and Willow		**8. Wetland Morphology:** Wetland floodway associated with a stream
8a. NEIWPCC Soils Criteria: No soils taken		
9. Notes: Not reviewed in field		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs		**X**	**X**					**X**					
Principal		**X**	**X**										

Impacted area notes: Area has slow moving water and a floodplain wetland. Flooding function is enhanced by the culvert . The stream is known to have fish and other aquatic organisms

Whole wetland notes:

11. Is this wetland part of larger complex: Yes

12. Impact Notes/Photos

112-9

112-10

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-1; 113-2	**5. Cowardin Class:** PFO	**6. Stationing/Location:**
7. Dominant Vegetation: Ash, cedars, alders, winterberry		**8. Wetland Morphology: Sloping wetland adjacent to road- 113-1 is down-gradient from Road, 113-2 is up-gradient**
8a. NEIWPCC Soils Criteria: No soils take at this point		
9. Notes: Planning level review		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WL	REC	ESV	U/H	VQA	ES
Occurs													
Principal								X					

Impacted area notes: The area functions as wildlife habitat as it is part of an upland habitat block that is use for disturbance tolerant species

Whole wetland notes:

11. Is this wetland part of larger complex: NO

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-3,113-4	**5. Cowardin Class:** PFO	**6. Stationing/Location:**
7. Dominant Vegetation: Ash, cedars, alders, winterberry		**8. Wetland Morphology: basin created by highway**
8a. NEIWPCC Soils Criteria: no soils data taken		
9. Notes: Small pockets		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs													
Principal													

Impacted area notes: These area are small and due to the small size, have to appreciable function

Whole wetland notes:

11. Is this wetland part of larger complex: no

12. Impact Notes/Photos

113-3

113-4

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-5	**5. Cowardin Class:** PSS	**6. Stationing/Location:**
7. Dominant Vegetation: Alders, Cattail, bulrush, sedges		**8. Wetland Morphology: Discharging slope**
8a. NEIWPCC Soils Criteria: None		
9. Notes: Area is discharging slope that keeps a small basin and slope wetland wet. There is a compacted trail that crosses the wetland		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**X**							**X**					
Principal	**X**												

Impacted area notes:

Whole wetland notes:

11. Is this wetland part of larger complex:

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-6	**5. Cowardin Class:** PEM	**6. Stationing/Location:**
7. Dominant Vegetation: Cattail, Sedges, Phalaris		**8. Wetland Morphology: Sloping basin**
8a. NEIWPCC Soils Criteria: None		
9. Notes: This is a drainage swale		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**x**												
Principal				**X**									

Impacted area notes: This area is a swale that collects surface run off. This was a bigger function when the area was a farm. It is now adjacent to the Cancer Center Parking lot. It is also at the base of slopes and hillside, so some groundwater discharging occurs

Whole wetland notes:

11. Is this wetland part of larger complex: no

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-7 and 113-9	**5. Cowardin Class:** RUS Upstream is PEM, Downstream is PSS	**6. Stationing/Location:** Stone Brook
7. Dominant Vegetation: PSS- Alders, Viburnum- PEM Cattail- sedges		**8. Wetland Morphology:** Stream associated- slow moving low gradient stream system
8a. NEIWPCC Soils Criteria: None		
9. Notes:		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs													
Principal		**X**	**X**										

Impacted area notes: This is a slow moving- mostly impounded stream segment. This has a broad flooded floodway, with some remaining storage. Stone Brook drains southeasterly away from the Old Belgrade Road crossing toward Bond Brook. This area stores rains and melt water, and also acts as habitat for herptile and other water dependant species

Whole wetland notes:

11. Is this wetland part of larger complex: Yes

12. Impact Notes/Photos
Downstream

Upstream

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-8	**5. Cowardin Class:** PEM in impact area	**6. Stationing/Location:**
7. Dominant Vegetation: Cattail, alders		**8. Wetland Morphology:** This is a Drainage wetland in a ravine.

8a. NEIWPCC Soils Criteria: None taken

9. Notes: This wetland is a long linear drainage run at the base of a slope. There is a well in the upper reaches. This wetland extends back toward the steep hill between Old Belgrade Road and Route 27

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs		**x**						**x**					
Principal	**X**												

Impacted area notes: Wetland is a drainage wetland \that collects overland run off and groundwater from a steep hill side. It is ponded near a private driveway. It is an undeveloped corridor that runs into the Stone Brook watershed

Whole wetland notes:

11. Is this wetland part of larger complex: yes

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-10 113-11	**5. Cowardin Class:** PEM	**6. Stationing/Location:**
7. Dominant Vegetation: Scirpus sp, cattail		**8. Wetland Morphology:** Drainage way
8a. NEIWPCC Soils Criteria: None taken		
9. Notes: This is a drainage swale though low topography. This collects overland flows and desynchronizes flood flows		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs													
Principal		**X**											

Impacted area notes:

Whole wetland notes:

11. Is this wetland part of larger complex: yes, this flows into the Stone brook wetland complex

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-12 113-13, 123-14, 113-15, 113-16. 113-17, 113-18, 113-19	**5. Cowardin Class:** PEM/PSS (113-13)	**6. Stationing/Location:**
7. Dominant Vegetation: Cattail. Sedges emergent vegetation		**8. Wetland Morphology:** Drainage swales in a field situation

8a. NEIWPCC Soils Criteria: No soils data

9. Notes: These are overland drainage channels within an open grassland area. These drain into a swale that drains into Stone Brook

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs		**X**		**X**									
Principal		**X**											

Impacted area notes: These wetlands capture and channel flood and rain waters. The wetlands near the road will capture sediments from the Interstate and ramps

Whole wetland notes:

11. Is this wetland part of larger complex:

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-20, 21, 22, 23,24,25	**5. Cowardin Class:** PEM	**6. Stationing/Location:**
7. Dominant Vegetation: Sedges bulrush, cattail		**8. Wetland Morphology:** Basin water collection and water discharge points- Mown field
8a. NEIWPCC Soils Criteria: No soils data taken		
9. Notes: These areas are in a mown field. They are low points that collect water surface and groundwater- There was evidence of amphibian breeding but ponded water was shallow and there was no evidence of sufficient hydro-period.		

10. FVA Table: **impacted area 113**-23 only. The rest are too small

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**x**					**x**		**x**					
Principal						**X**							

Impacted area notes: These areas are mown, so that they export food out of the wetland by human action

Whole wetland notes:

11. Is this wetland part of larger complex: Yes

12. Impact Notes/Photos

Overview

Wetland 113-23

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-25	**5. Cowardin Class:** PEM/LUS	**6. Stationing/Location:**
7. Dominant Vegetation: Reed Canary Grass- Bulrushes.		**8. Wetland Morphology: This is a drainage swale that drains into a ponded area adjacent to Eight Rod Road**
8a. NEIWPCC Soils Criteria:		
9. Notes:		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**x**	**x**											
Principal		**X**											

Impacted area notes: This area captures run off and small amounts of groundwater discharge and carries it to a ponded area.

Whole wetland notes:

11. Is this wetland part of larger complex: Yes

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: 113-26	**5. Cowardin Class: Sedges/** Reed canary Grass	**6. Stationing/Location:**
7. Dominant Vegetation:		**8. Wetland Morphology:** Discharging slope
8a. NEIWPCC Soils Criteria: No data		
9. Notes:		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**X**			**X**	**X**								
Principal					**X**								

Impacted area notes: This area captures the run off and sediments from the adjacent highway

Whole wetland notes:

11. Is this wetland part of larger complex: Yes

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: Conn-1, Conn-2	**5. Cowardin Class:** PSS/UB	**6. Stationing/Location:**
7. Dominant Vegetation: Grasses, alders. willows		**8. Wetland Morphology: Basin**
8a. NEIWPCC Soils Criteria: No soils taken		
9. Notes:		

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**X**	**X**						**X**					
Principal	**X**												

Impacted area notes: This area is fed by groundwater that pools up in an artificial pool. Amphibians are found in the pool

Whole wetland notes:

11. Is this wetland part of larger complex:

12. Impact Notes/Photos

Functional assessment:

1. Town: Augusta	**2. Route:** Exit 112-113 study- Old Belgrade RD	**3. PIN:** 17592.00
4. Wetland ID: Conn-3	**5. Cowardin Class: PSS/UB**	**6. Stationing/Location:**
7. Dominant Vegetation: Winterberry, Alders		**8. Wetland Morphology:** Basin Morphology

8a. NEIWPCC Soils Criteria: No soils taken

9. Notes: This appears to be a natural vernal pool with significant numbers of Spotted salamanders and Woodfrogs 12 Eggmasses and 50 eggmasses respectively

10. FVA Table: impacted area

F/V	GRD	FFA	AH	STR	NTR	PE	SSS	WH	REC	ESV	U/H	VQA	ES
Occurs	**X**							**X**					
Principal								X					

Impacted area notes:

11. Is this wetland part of larger complex:

12. Impact Notes/Photos

Appendix 3- information from resource agencies

Maine Department of Inland Fisheries and Wildlife email

From: Kemper, Keel
Sent: Tuesday, November 17, 2009 2:36 PM
To: Bostwick, Richard
Cc: Connolly, James
Subject: RE: Augusta Exit 113- Exit 112 study

This location appears to have no essential or significant wildlife habitat associated with the area. Minimum impacts to wildlife may be anticipated.

KK

From: Bostwick, Richard
Sent: Tuesday, November 17, 2009 1:41 PM
To: Kemper, Keel; Demers, Sarah
Cc: Connolly, James
Subject: Augusta Exit 113- Exit 112 study

HI Keel and Sarah
This is a rough study area map of the traffic study going on in North Augusta that is looking at traffic issues with Existing Route 27, and looking at strategies that may involve extending the current Exit 113 to Old Belgrade Road. This may involve a connector road between Old Belgrade Road the Route 27 (shown)
Sarah, I believe you may have sent this already. Steve Timpano has

I wanted to get any comments from you to add to our administrative record

I have put notable landmarks on the photo.
Deer wintering areas are shown in blue. The Sidney Bog is northerly of this area.

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Richard Bostwick
MaineDOT -ENV
16 SHS Augusta, ME 04333-0016
207-592-3904 FAX 207-624-3101
richard.bostwick@maine.gov

Maine Natural Areas Program

17 Elkins Lane

State House Station #93

Augusta, Maine 04333

Date: December 7, 2009

To: Richard Bostwick

From: Sarah Demers SD

Re: Rare and exemplary botanical features in proximity to DOT Augusta Exit 113 Traffic Study, Augusta, Maine.

I have searched the Natural Areas Program's Biological and Conservation Data System files for rare or unique botanical features in the vicinity of the proposed site in response to your request of November 17, 2009 for our agency's comments on the project.

According to our current information, there are no rare botanical features that will be disturbed within the project site. This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We welcome the contribution of any information collected if a site survey is performed.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact our office if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.
